CLAIMS

1. An internal combustion engine characterized in that: a copper alloy contains from 0.1 to 2% by weight of Ag and from 1 to 10% by weight of Sn as the essential elements, the balance essentially consisting of Cu, is bonded to a backing metal, and has on its side opposite to the backing metal a roughened surface of approximately 0.5 to approximately 10 μm of roughness (Rz); the roughened surface is coated with at least one thermo-setting resin, which is selected from the group consisting of polyimide resin, polyamide-imide resin, epoxy resin and phenol resin, and which contains from 55 to 95% by weight of MoS_2 ; Ag and Sn are solid-dissolved in the Cu matrix of the copper alloy in at least the vicinity of the sliding surface where essentially no secondary phase of these elements is formed; and, a concentrated layer of said Ag and Sn, a hexagonal compound of these Ag and Sn with one another, a hexagonal compound of Cu and these elements, or a eutectic of Ag and Sn or Cu and these elements, is formed as a sub-layer of at least a portion of the sliding layer, which portion is brought into direct contact with an opposing shaft.

2. A sliding bearing according to claim 1, characterized in that said copper alloy contains 10% by weight or less of at least one additive element selected from the group consisting of Sb, In, Al, Mg and Cd;the essential elements and the additive elements are solid-dissolved in the Cu matrix of the copper alloy in at least the vicinity of the sliding surface where essentially no secondary phase of these elements is formed; and, a concentrated layer of said essential and additive elements, a hexagonal compound of these elements with one another, a hexagonal compound of Cu and these elements, or a eutectic of said essential elements and additive elements or Cu and these elements, is formed as a sub-layer of at least a portion of the sliding layer, which portion is brought into direct contact with an opposing shaft.

3. A sliding bearing for an internal combustion engine according to claim 1 ~~or 2~~, wherein said roughened surface is formed by grooves extending into the sliding direction.

4. A sliding bearing for an internal combustion engine according to claim 1 ~~or 2~~, wherein said roughened surface is formed by shot-blasting, etching, flame-spraying or chemical treatment.

5. A sliding bearing for an internal combustion engine according to claim 1 ~~or 2~~, wherein said roughened surface is formed by shot-blasting, etching, flame-spraying or chemical treatment of a surface of grooves extending in the sliding direction.

6. A sliding bearing for an internal combustion engine according to ~~any one of~~ claims ~~1 through 5~~ 11, wherein the average particle diameter of said MoS_2 is 15 μm or less.

7. A sliding bearing for an internal combustion engine according to ~~any one of~~ claims ~~1 through 6~~, wherein said coating layer further contains one or more of a solid lubricant, extreme pressure agent and friction adjusting agent.